

DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

GEONAMES Data Base of Geologic Names  
of the United States through 1988

Compiled by

G.W. Luttrell<sup>1</sup>

M.L. Hubert<sup>1</sup>

C.R. Murdock<sup>1</sup>

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<sup>1</sup>Reston, VA 22092

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of the United States Through 1988

The GEONAMES data base is an annotated index lexicon of formal geologic nomenclature of the United States, its territories and possessions. The data base was compiled by R. W. Swanson, M. L. Hubert, G. W. Luttrell, and V. M. Jussen and was published in 1981 as Geologic names of the United States through 1975: U.S. Geological Survey Bulletin 1535, 643 p. This version of GEONAMES has been updated based on information published through 1988, and it contains approximately 30,000 records relating to more than 18,000 names.

Data are entered in 10 fixed fields containing up to 123 characters of information for each record. The fields are: 1. location of unit; 2. geologic age; 3. name of unit; 4. USGS usage; 5. lithology; 6. geologic province; 7. thickness at type section; 8. location of type section; 9. lexicon reference; 10. unique identifier.

DEFINITION OF FIELDS. The formats and codes used in the fields are explained below. Fields 5, 6, 7, 8, and 9 are used only once for each unit as this information pertains to its type locality and original reference.

FIELD 1. LOCATION. The U.S. Postal Service 2-letter abbreviations are used to identify the State, territory, or possession in which the unit is located.

AL	Alabama	NH	New Hampshire
AK	Alaska	NJ	New Jersey
AZ	Arizona	NM	New Mexico
AR	Arkansas	NY	New York
CA	California	NC	North Carolina
CO	Colorado	ND	North Dakota
CT	Connecticut	OH	Ohio
DC	District of Columbia	OK	Oklahoma
DE	Delaware	OR	Oregon
FL	Florida	PA	Pennsylvania
GA	Georgia	RI	Rhode Island
HI	Hawaii	SC	South Carolina
ID	Idaho	SD	South Dakota
IL	Illinois	TN	Tennessee
IN	Indiana	TX	Texas
IA	Iowa	UT	Utah
KS	Kansas	VT	Vermont
KY	Kentucky	VA	Virginia
LA	Louisiana	WA	Washington
ME	Maine	WV	West Virginia
MD	Maryland	WI	Wisconsin
MA	Massachusetts	WY	Wyoming
MI	Michigan	CZ	Canal Zone
MN	Minnesota	CI	Caroline Islands
MS	Mississippi	GU	Guam
MO	Missouri	MR	Mariana Islands
MT	Montana	PR	Puerto Rico
NE	Nebraska	SA	Samoa
NV	Nevada	VI	Virgin Islands

FIELD 2. GEOLOGIC AGE. The geologic age at the time of the last update is represented, with minor modifications, by the 3-digit code devised by the AAPG Committee on Standard Stratigraphic Coding.

ERA	PERIOD	EPOCH OR PROVINCIAL SERIES	CODE		
Cenozoic			100		
		late	101		
		middle	104		
		early	107		
		Quaternary		110	
			Holocene	111	
			Pleistocene	112	
		Tertiary		120	
			Pliocene	121	
			Miocene	122	
			Oligocene	123	
			Eocene	124	
			Paleocene	125	
				200	
		Mesozoic			201
late	204				
middle	207				
early	210				
Cretaceous				211	
	Late			212	
	Gulfian			213	
	Comanchean			217	
	Early			218	
	Comanchean			219	
	Coahuilan			220	
	Jurassic				221
				Late	224
				Middle	227
Triassic				230	
	Late	231			
	Middle	234			
	Early	237			
		300			
Paleozoic			301		
		late	304		
		middle	307		
		early	310		
		Permian		311	
			Late	312	
			Ochoan	313	
			Guadalupian	317	
			Early	318	
			Leonardian	319	
Wolfcampian					

ERA	PERIOD	EPOCH OR PROVINCIAL SERIES	CODE
	Pennsylvanian		320
		Late	321
		Virgilian	322
		Missourian	323
		Middle	324
		Des Moinesian	325
		Atokan	326
		Early	327
		Morrowan	328
	Mississippian		330
		Late	331
		Chesterian	332
		Meramecian	333
		Early	337
		Osagean	338
		Kinderhookian	339
	Devonian		340
		Late	341
		Middle	344
		Early	347
	Silurian		350
		Late	351
		Middle	354
		Early	357
	Ordovician		360
		Late	361
		Middle	364
		Early	367
	Cambrian		370
		Late	371
		Middle	374
		Early	377

TIME	EON	ERA	CODE
Precambrian			400
	Proterozoic		401
		Late	410
		Middle	420
		Early	430
	Archean		404
		Late	440
		Middle	450
		Early	460
	pre-Archean		407

FIELD 3. NAME. The geologic name consists of a geographic name combined with a rank or descriptive term. A comma separates the two parts of the name. If a unit is part of a higher ranking unit, the name of that unit follows in parentheses. A slash (/) preceding a name indicates a violation of the North American Stratigraphic Code (for instance, a name may have been used previously in the same area, or a rank term may have been used improperly or may have been omitted).

FIELD 4. USGS USAGE. A "U" is entered in this field if the line entry is based on usage in a USGS report.

FIELD 5. LITHOLOGY. The principal lithology of the unit at the type section is given. If lithology is indicated by the unit name, the lithology column may be blank.

AGL	agglomerate	GNS	greenstone	NVC	novaculite
ALV	alluvium	GR	granite	OBS	obsidian
AMP	amphibolite	GRD	granodiorite	OOL	oolite
AND	andesite	GRNL	granulite	PCL	pyroclastics
ANH	anhydrite	GVL	gravel	PHL	phyllite
ANR	anorthosite	GYK	graywacke	PHS	phosphate
ARG	argillite	GYP	gypsum	PMC	pumice
ARK	arkose	HNF	hornfels	POR	porphyry
ASP	asphalt	IG	igneous rock	QZ	quartz
BAS	basalt	IGNM	ignimbrite	QZD	quartz diorite
BAUX	bauxite	INTR.	intrusive rock	QZM	quartz monzonite
BNT	Bentonite	LAT	latite	RDBD	redbed
BRC	breccia	LOS	loess	RHY	rhyolite
CH	chert	LV	lava	SCH	schist
CL	clay	MBL	marble	SD	sand
CLS	claystone	MBNT	metabentonite	SED	sedimentary rock
CST	clastic rock	MCK	muck	SL	slate
DAC	dacite	MD	mud	SRP	serpentine
DBS	diabase	MET	metamorphic rock	ST	silt
DRT	diorite	MGM	migmatite	SYN	syenite
DRF	drift	MGYK	metagraywacke	TF	tuff
DTM	diatomite	MIG	metaigneous rock	TL	till
EVP	evaporite	MRL	marl	TRC	trachyte
FE	iron-formation	MS	mudstone	ULTM	ultramafic rock
GAB	gabbro	MSED	metasedim. rock	VOL	volcanic rock
GLC	glauconite	MSTS	metasiltstone	VSED	volcanic sed.
GN	gneiss	MVOL	metavolcanic rock		

FIELD 6. GEOLOGIC PROVINCE. The 3-digit geologic province code devised by the AAPG Committee on Statistics of Drilling is used.

100	New England province
110	Adirondack uplift
120	Atlantic Coast basin
130	South Georgia-North Florida sedimentary province
140	South Florida province
150	Piedmont-Blue Ridge province
160	Appalachian basin
200	Warrior basin
210	Mid-Gulf Coast basin
220	Gulf Coast basin
230	Arkla basin

240 Desha basin  
250 Upper Mississippi embayment  
260 East Texas basin  
300 Cincinnati arch  
305 Michigan basin  
310 Wisconsin arch  
315 Illinois basin  
320 Sioux uplift  
325 Iowa shelf  
330 Lincoln anticline  
335 Forest City basin  
340 Ozark uplift  
345 Arkoma basin  
350 South Oklahoma folded belt province  
355 Chautauqua platform  
360 Anadarko basin  
365 Cherokee basin  
370 Nemaha anticline  
375 Sedgwick basin  
380 Salina basin  
385 Central Kansas uplift  
390 Chadron arch  
395 Williston basin  
400 Ouachita tectonic belt province  
405 Kerr basin  
410 Llano uplift  
415 Strawn basin  
420 Fort Worth syncline  
425 Bend arch  
430 Permian basin  
435 Palo Duro basin  
440 Amarillo arch  
445 Sierra Grande uplift  
450 Las Animas arch  
455 Las Vegas-Raton basin  
460 Estancia basin  
465 Orogande basin  
470 Pedregosa basin  
475 Basin-and-Range province  
500 Sweetgrass arch  
505 Montana folded belt province  
510 Central Montana uplift  
515 Powder River basin  
520 Big Horn basin  
525 Yellowstone province  
530 Wind River basin  
535 Green River basin  
540 Denver basin  
545 North Park basin  
550 South Park basin  
555 Eagle basin  
560 San Luis basin  
565 San Juan Mountain province  
570 Uinta uplift  
575 Uinta basin  
580 San Juan basin  
585 Paradox basin  
590 Black Mesa basin

595 Piceance basin  
600 Northern Cascade Range-Okanagan province  
605 Eastern Columbia basin  
610 Idaho Mountains province  
615 Snake River basin  
620 Southern Oregon basin  
625 Great Basin province  
630 Wasatch uplift  
635 Plateau sedimentary province  
640 Mojave basin  
645 Salton basin  
650 Sierra Nevada province  
700 Bellingham basin  
705 Puget Sound province  
710 Western Columbia basin  
715 Klamath Mountains province  
720 Eel River basin  
725 Northern Coast Range province  
730 Sacramento basin  
735 Santa Cruz basin  
740 Coastal basins  
745 San Joaquin basin  
750 Santa Maria basin  
755 Ventura basin  
760 Los Angeles basin  
765 Capistrano basin  
800 Heceta Island area  
805 Keku Islands area  
810 Gulf of Alaska basin  
815 Copper River basin  
820 Cook Inlet basin  
830 Kandik province  
835 Kobuk province  
840 Koyukuk province  
845 Bristol Bay basin  
846 Aleutians Islands  
850 Bethel basin  
855 Norton basin  
860 Selawik basin  
863 Yukon Flats basin  
865 Lower Tanana basin  
867 Middle Tanana basin  
870 Upper Tanana basin  
873 Galena basin  
875 Innoko basin  
877 Minchumina basin  
880 Holitna basin  
885 Arctic Foothills province  
890 Arctic Slope basin

FIELD 7. THICKNESS. Thickness at the type section, in meters, rounded to the second significant figure is shown. Where this information is unavailable, the maximum thickness is given, if known.

FIELD 8. TYPE LOCALITY. One of nine parts of the State in which the type section, locality, or area of a unit is located. Each State is divided into nine parts, designated NW, NC, NE, WC, C, EC, SW, SC, SE, by dividing its maximum latitudinal and longitudinal dimensions by three. Canada and Mexico are designated by CAN AND MEX.

FIELD 9. REFERENCE. The letters A through H refer to the volume of the lexicon of Geologic Names in which a name was first described:

- A. Wilmarth, M. G., 1938, Lexicon of geologic names of the United States: U.S. Geol. Survey Bull. 896, 2 v.
- B. Wilson, Druid, and others, 1957, Geologic names of North America introduced in 1936-1955: U.S. Geol. Survey Bull. 1056-A, 405 p.
- C. Keroher, G. C., and others, 1966, Lexicon of geologic names of the United States for 1936-1960: U.S. Geol. Survey Bull. 1200, 3 v.
- D. Keroher, G. C., 1970, Lexicon of geologic names of the United States for 1961-1967: U.S. Geol. Survey Bull. 1350, 848 p.
- E. Luttrell, G. W., Hubert, M. L., Wright, W. B., Jussen, V. M., and Swanson, R. W., 1981, Lexicon of geologic names of the United States for 1968-1975: U.S. Geol. Survey Bull. 1520, 342 p.
- F. Luttrell, G. W., Hubert, M. L., and Jussen, V. M., 1986, Lexicon of new formal geologic names of the United States 1976-1980: U.S. Geol. Survey Bull. 1564, 191 p.
- G. Luttrell, G. W., Hubert, M. L., and Murdock, C. R., (in press), Lexicon of new formal geologic names of the United States 1981-1985: U.S. Geol. Survey Bull. 1565.
- H. Geologic names introduced after 1985. (No publication available.)

FIELD 10. UNIQUE IDENTIFIER. A unique identifier consisting of a four-letter mnemonic plus a two-digit number is assigned to each record. It is used for recalling records for updating and for sorting. The mnemonic is derived from the geographic part of the name using a method devised by the AAPG Committee on Standard Stratigraphic Coding. English articles and prepositions are deleted first; those in foreign languages are retained. The first letter of each remaining word is retained. Names beginning with Mc, O', De, or Van are treated as two words. Letters are then deleted, from right to left, in the following order until four remain: a, e, i, o, u, w, h, y, one of each double, t, n, s, r, l, d, c, m, f, g, p, k, b, v, x, j, q, z. All the records for each name have the same mnemonic but different numbers.

## DATA RETRIEVAL

GEO NAMES is now available on IBM-compatible 5 1/4-in diskettes from Open File Services. The files were first sorted by state and then downloaded onto 16 diskettes, each one generally containing data for two or more adjacent states. Users may purchase one or more diskettes, combine the states, or use them individually, depending upon their specific needs and computer equipment. These state files can be loaded into and manipulated with almost any database management software. (Records are loaded into dBase, for instance, using the command "append from [file name] sdf.") In setting up fields, use the following parameters.

FIELD NAME	SIZE
[State]	[4]
[Age]	[4]
[Slash]	[1]
[Name]	[62]
[Use]	[5]
[Lith]	[14]
[Prov]	[6]
[Thick]	[10]
[TypLoc]	[6]
[Ref]	[4]
[ID]	[7]

The slash has been placed in a separate field in order to simplify sorting.

GEO NAMES is also available on 8-track magnetic tape from NTIS. Units for the entire nation are listed alphabetically on the tape. This media may be more suitable for users interested in geologic names of the United States as a whole.

Following is a breakdown by diskette, showing the states, number of records, and the approximate size of the files. An asterisk indicates states included in more than one geographic grouping. Each diskette also contains the document, Geointro, a users guide to GEO NAMES.

CHAPTER	DISK #	STATE	RECORDS	KBYTES
A	1	ME	436	55
		NH	246	31
		VT	592	74
		MA	353	44
		CT	316	40
		RI	61	8
			<u>2004</u>	<u>252</u>
B	2	NY	1260	158
		PA	1143	143
			<u>2403</u>	<u>301</u>
C	3	NJ	263	33
		MD	484	61
		DE	73	9
		DC	34	4
		VA*	881	110
		WV	597	75
			<u>2332</u>	<u>292</u>
D	4	KY	575	72
		TN	637	80
		MS	218	27
		AL	517	65
			<u>1947</u>	<u>244</u>
E	5	VA*	881	110
		NC	348	44
		SC	166	21
		GA	591	74
		FL	229	29
			<u>2215</u>	<u>278</u>
F	6	OH	547	69
		IN	502	63
		IL	743	93
		WI	413	52
		MI	408	51
			<u>2613</u>	<u>328</u>
G	7	MN	304	38
		ND	326	41
		SD	295	37
		NE	476	60
		IA	542	68
			<u>1943</u>	<u>244</u>

CHAPTER	DISK #	STATE	RECORDS	KBYTES
H	8	OK	1098	137
		KS	658	82
		MO	740	93
			<u>2496</u>	<u>312</u>
I	9	TX	1653	207
		LA	270	34
		AR	268	34
			<u>2191</u>	<u>275</u>
J	10	MT	809	101
		WY	855	107
		ID*	693	87
			<u>2357</u>	<u>295</u>
K	11	CO	881	110
		NM	1151	144
			<u>2032</u>	<u>254</u>
L	12	AZ	892	112
		UT*	1191	149
			<u>2083</u>	<u>261</u>
M	13	WA	694	87
		OR	557	70
		ID*	693	87
			<u>1944</u>	<u>244</u>
N	14	NV	1110	139
		UT*	1191	149
			<u>2301</u>	<u>288</u>
O	15	CA	2050	234
P	16	AK	813	102
		HI	90	12
		CI	45	6
		MR	43	6
		SA	34	5
		GU	33	4
		PR	261	33
		VI	31	4
			<u>1350</u>	<u>172</u>